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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,144	08/23/2001	Robert Barry Wood	STL9833/40046.150USU1	1721

28863 7590 09/07/2007

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EXAMINER	
PARK, ILWOO	

ART UNIT	PAPER NUMBER
2182	

MAIL DATE	DELIVERY MODE
09/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

mN

Office Action Summary	Application No.	Applicant(s)	
	09/938,144	WOOD, ROBERT BARRY	
	Examiner	Art Unit	
	Ilwoo Park	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,16-22,24-26 and 28-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,16-22,24-26 and 28-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/15/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claim 32 is added in response to the last office action. Claims 1-6, 16-22, 24-26, and 28-32 are presented for examination.

Response to Arguments

Applicant's arguments filed 6/22/2007 have been fully considered but they are not persuasive. In the Remarks, Applicant argues in substance that 'the microcontroller control program' in Stefanksy is not equivalent to an 'operating system' because an 'operating system' is "software that controls the operation of a computer and directs the processing of programs (as by assigning storage space in memory and controlling input and output functions." Stefanksy fails to disclose that the microcontroller operates any program other than the microcontroller control program. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "controls the operation of a computer", "assigning storage space in memory", "controlling input and output functions") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Stefanksy at least teaches an operating system [microcontroller control program] which controls the operation of a device [disk drive] and runs application program [tasks including interface for SCSI bus application and interface for AT bus application in col. 8, lines 35-55].

Applicant argues that Schneider fails to consider that the micro-controller may run an operating system running an application program. For this point, the Examiner

respectfully disagrees. Schneider discloses that the micro-controller runs an operating system [firmware] running an application program ['operating code' in col. 4, lines 5-16].

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 32 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Nowhere in Specification discloses "the device not subservient to a host device."

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 5, 16-19, 22, 24-26, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stefanksy [US 6,226,143 B1] in view of Schneider [US 6,363,487 B1].

As for claim 1, Stefanksy teaches a device [disk drive] comprising:

a data disc [rotating disk 44 in fig. 2] rotatably mounted on a baseplate [base 20 in fig. 1];

a printed circuit board (PCB) [PCB 36 in fig. 1] fastened to the baseplate having a servo controller; and

a central processing unit (CPU) [microcontroller 224 in fig. 14] mounted to the PCB running [col. 8, lines 25-40] an operating system [microcontroller control program].

As for claim 18, Stefanksy teaches an intelligent storage element [disk drive] comprising:

a case forming a substantially sealed environment [col. 5, lines 48-60];

a data disc [rotating disk 44 in fig. 2] mounted within the case [fig. 1];

a central processing unit (CPU) [microcontroller 224 in fig. 14] mounted within the case; and

a memory mounted within the case, wherein the memory stores [col. 8, lines 25-40] an operating system [microcontroller control program], and the central processing unit runs the operating system.

Though Stefanksy further teaches an application program [e.g., 'tasks including an interface task' applicable to support 'SCSI or AT bus' in col. 8, lines 39-55] stored in a memory and run by the operating system, Stefanksy does not teach the memory storing the application program is the data disc; rather, Stefanksy only discloses the memory storing the application program is a read only memory [such as a ROM 226 in col. 8, lines 34-40]. Schneider teaches a device [disk drive 20 in fig. 1] comprising a data disc [disk 10 in fig. 2] and a CPU [microcontroller 22 in figs. 1-2] running

application program [operating code 8 in fig. 1] by an operating system [firmware]. Schneider further teaches the application program can be stored not only in a read only memory but also in the data disc [col. 4, lines 5-16]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify to implement an application program to be stored in a data disc in order to increase flexibility to be changeable or upgradeable of the application as taught by Schneider.

As for claim 16, Stefanksy teaches a device comprising: a printed circuit board (PCB) [PCB 36 in fig. 1]; a central processing unit (CPU) [microcontroller 224 in fig. 14] mounted to the PCB running [col. 8, lines 25-40] an operating system [microcontroller control program]; and a memory [ROM 226] mounted on the PCB storing an application program [e.g., 'tasks including an interface task' applicable to support 'SCSI or AT bus' in col. 8, lines 39-55], wherein the application program is run by the operating system running in the CPU. However, Stefanksy does not teach the memory is selected from a group consisting of electronically erasable programmable read only memory (EEPROM) and a flash memory. Schneider teaches a device [disk drive 20 in fig. 1] comprising a data disc [disk 10 in fig. 2] and a CPU [microcontroller 22 in figs. 1-2] running application program [operating code 8 in fig. 1] by an operating system. Schneider further teaches the application program can be stored in a flash memory [col. 4, lines 5-16]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify to implement an application program to be stored in a data disc in order to increase flexibility to be changeable or upgradeable of the application as taught by Schneider.

As for claims 5 and 29, Stefanksy teaches the device is a three and one half inch form factor assembly [col. 5, lines 12-18].

As for claim 17, Schneider teaches the memory stores both the operating system and the application program, wherein the application program for use by the CPU [col. 4, lines 5-16].

As for claim 19, Stefanksy teaches the data disc is a magnetic data storage media [col. 4, lines 60-64].

As for claim 22, Stefanksy teaches the case comprising a base and a top cover [base 20 and cover 24 in fig. 1].

As for claim 24, Schneider teaches the memory is random access memory [col. 4, lines 11-13].

As for claim 25, Stefanksy teaches a head [head 220 in fig. 14] that reads data from the data disc to produce a signal; and a channel [R/W CTL 236 in fig. 14] mounted to the PCB, wherein the channel receives the signal from the head.

As for claim 26, Stefanksy teaches the CPU generates control signals to the servo controller [e.g., col. 9, lines 19-28].

As for claim 30, Schneider teaches the application program can be stored in a flash memory [col. 4, lines 5-16]

6. Claims 2, 6, 20, 21, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stefanksy and Schneider as applied to claims 1 and 18 above, and further in view of Glover [US 6,282,045 B1].

As for claims 2 and 20, though the combination of Stefanksy and Schneider teaches the device [disk drive] having an input/output module [Stefanksy: interface control circuit 228 in fig. 14] is connected to a communications line [col. 8, lines 41-55], Stefanksy does not expressly disclose the communications line includes a communications network. Glover teaches a device [disk drive] has a central processing unit (CPU) [DSP 26 in fig. 1] running [col. 6, lines 26-43] an operating system and an input/output module [disk control circuitry 24 in fig. 1] directly connected [col. 3, lines 46-52; col. 3, lines 16-18] to a communications network for communicating to a node connected to the network. At the time of the invention, one of ordinary skill in the art would have been obvious to modify to include a device directly connecting to a communications network and communicating with a node connected to the network in order to increase flexibility rather than the device communicating with a network node through a personal computer or a server as taught by Glover [col. 3, lines 10-15; col. 4, lines 31-41].

As for claim 6, the combination of Stefanksy and Schneider does not disclose a file system managing file data stored on the data disc, wherein the file system is in direct communication with the servo controller. Glover teaches a file system managing file data stored on the data disc, wherein the file system is in direct communication with the servo controller [col. 6, lines 13-25; fig. 1]. At the time of the invention, one of ordinary skill in the art would have been obvious to include a file system in order to increase functionality of independently operating the device servicing a request from a

network client directly connection to network without through a computer by having the file system as taught by Glover.

As for claim 21, Glover teaches the network is a local area network [col. 3, lines 16-18].

As to claim 32, the combination of Stefanksy and Schneider does not expressly disclose the device not subservient to a host device. Glover teaches the device not subservient to a host device ["hard disk drive as a stand alone server in col. 4, lines 32-37]. At the time of the invention, one of ordinary skill in the art would have been obvious to include the device being not subservient to a host device in order to increase applicability for the disk drive as a stand alone device without having a computer [Glover: col. 3, lines 16-37].

7. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stefanksy and Schneider in view of Glover as applied to claim 2 above, and further in view of Durrett [US 5,964,830].

As for claim 3, the combination of Stefanksy, Schneider, and Glover teaches the input/output module includes a network interface module operable to communicate to a node on the network [col. 4, lines 31-41]. However, Glover does not explicitly disclose a hypertext transport protocol is used for the network communication. Durrett teaches a device [user portal device 10 in fig. 1] having an input/output module [e.g., col. 5, lines 23-30] capable of directly communicating with a node connected to a communications network using a hypertext transport protocol. At the time of the invention, one of

ordinary skill in the art would have been obvious to use a hypertext transport protocol as a network communication protocol in order to adapt the prevalent network protocol.

As for claim 4, the combination of Stefanksy, Schneider, and Glover teaches the input/output module having a plurality of input/output modules [Glover: col. 5, lines 58-67], the combination does not explicitly teach the input/output module further including a video interface module to drive a video monitor via the communications network. Durrett teaches the input/output module further including a video interface module to drive a video monitor via the communications network [e.g., internal VGA 53A, external VGA and NTSC 44 in fig. 5A]. At the time of the invention, one of ordinary skill in the art would have been obvious to include a video interface module in the plurality of input/output modules in order to increase user friendliness since the device operable as a stand alone device [Glover: col. 4, lines 32-37] without having a computer.

8. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stefanksy and Schneider as applied to claim 1 above, and further in view of in view of Durrett [US 5,964,830].

As for claim 31, the combination of Stefanksy and Schneider does not disclose the application program is selected from a group consisting of a spreadsheet program, a word processor program, and an accounting program. Durrett teaches a data disc stores an application program including a word processor program run by the operating system [col. 1, lines 62-65; col. 6, lines 4-12]. At the time of the invention, one of ordinary skill in the art would have been obvious to modify to combine the cited references to include a word processor program in the application program in order to

increase user friendliness by providing stand-alone capability operable to the user as taught by Durrett [abstract].

9. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stefanksy and Schneider as applied to claim 1 above, and further in view of well known in the art.

As for claim 28, Inoue the CPU runs the operating system. However, Inoue does not disclose the operating system is an open-source operating system. The open-source operating system is well known in the art. At the time of the invention, one of ordinary skill in the art would have been obvious to modify to include the royalty free open-source operating system in order to reduce a product cost.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ilwoo Park whose telephone number is (571) 272-4155. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ILWOO PARK
PRIMARY EXAMINER

Ilwoo Park

September 3, 2007